

The experience of the Tennessee Valley Authority with its massive coal burning powerplants (perhaps the largest in the world) makes clear the same interlocking of many forces. None of these lend themselves too easily to any generalized legislative requirement. Over at least 10 years TVA has struggled with air pollution prevention. The three basic methods have dealt with devices to control or reduce stack emissions, the elevation of stack-emitted plumes, and actual curtailment of operation or the use of lower sulfur content coal in extreme and infrequent periods of inadequate atmospheric ventilation. So far plant scale removal and recovery of SO_2 for commercial purposes have not been demonstrated as successful.

The experience with stack heights has been illuminating. Progressively the heights have risen from relatively low levels to 170, 400, 500, 600, and 800 feet (Bull Run plant).

All the operations are accompanied by semiweekly statements known as "stagnation trend advisories." These on occasion give way to "stagnation alert bulletins." On rare situations, the "extreme local stagnation warning" is issued. In such episodes, operations in fact are curtailed or shut down.

These details are recorded to illustrate the importance of local, regional, or even single plant regulation to create the most satisfactory equilibrium between weather, fuel, and general operating regime.

The air pollution abatement program, therefore, requires (a) the determination of whether a real problem exists and where, (b) definition of what the problem is, (c) the demonstration that economical and effective methods for correction are available, (d) the selection of alternatives to compulsion, (e) where compulsion is indicated, the provision of wise and fair administration, and (f) the placement of administration as close to problem location as possible, often within the municipality or the metropolitan region.

During the preparation of this document, the American Association for the Advancement of Science issued, in 1965, the report of the Air Conservation Commission (Publication No. 80). The Commission made four basic assumptions essential for rational consideration of the problem of air pollution. These are: (1) Air is in the public domain; (2) air pollution is an inevitable concomitant of modern life; (3) scientific knowledge can be applied to the shaping of public policy; and (4) methods to reduce air pollution must not increase pollution in other sectors of man's environment.

Once more a careful study by an eminent group results in a reiteration of basic principles in its list of recommendations. These are few in number, of obvious validity, and rest upon sane administrative practice, tempered by time to assess and to identify problem and solution. In brief, the Commission recommends that—

(1) Scientists in all disciplines become familiar with the available information about air pollution, and they play active roles in informing both the public and public policy bodies of the facts and their significance.

(2) Decisions on what to do about the facts—the actual weighing of risks versus benefits—should be a responsibility of the entire community, including scientists (special emphasis is placed upon the care which must be exercised in the development